AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method for chemically treating a liquid medium loaded with nitrates, comprising contacting zinc with said liquid medium, wherein the liquid medium has a pH less than 4 and the zinc is in the form of chips.

2. (Previously Presented) The method according to claim 1, further comprising maintaining the pH of said liquid medium by a regular adjustment with the addition of acid to the liquid medium.

3. (Previously Presented) The method according to claim 2, wherein the acid is hydrochloric acid.

4. (Previously Presented) The method according to claim 2, wherein the pH adjustment is carried out at least every half hour throughout the treatment.

5. (Previously Presented) The method according to claim 1, wherein the liquid medium has a temperature greater than 20°C during contacting.

6. (Previously Presented) The method according to claim 1, wherein the liquid medium has a temperature of approximately 20°C.

Claim 7 (Cancelled).

8. (Currently Amended) The method according to claim ~~7~~1, wherein the zinc and the nitrates in solution have a weight ratio of at least 5.

9. (Currently Amended) The method according to claim ~~7~~1, wherein the liquid medium is stirred.

10. (Previously Presented) The method according to claim 9, wherein the stirring is carried out by pulses or by static mixers.

11. (Previously Presented) The method according to claim 9, wherein the liquid medium is stirred at a speed of at least 0.55 m/s.

12. (Previously Presented) The method according to claim 1, wherein the liquid medium has an initial concentration of nitrates greater than 25 mg/L.

13. (Previously Presented) The method according to claim 1, wherein the liquid medium has an initial concentration of nitrates greater than 50 mg/L.

Claim 14 (Cancelled).

15. (Currently Amended) The method according to claim ~~14~~1, wherein the zinc chips are degreased and rinsed with distilled water.

16. (Currently Amended) The method according to claim ~~14~~1, wherein the zinc and the liquid medium have a surface area between them of at least 0.0156 m^2/L.

17. (Previously Presented) The method according to claim 16, wherein the contact surface area between the zinc and the liquid medium is approximately 0.25 m^2/L.

18. (Previously Presented) The method according to claim 1, wherein the liquid medium is drainage water.

19. (Previously Presented) The method according to claim 18, wherein the drainage water has a concentration of nitrates greater than 1 g/L.

20. (Previously Presented) The method according to claim 1, wherein the liquid medium in contact with the zinc has a flow rate of circulation greater than 0.005 m/s.

21. (Previously Presented) The method according to Claim 20, wherein the flow rate of circulation of the liquid medium in contact with the zinc is approximately 0.01 m/s.

22. (Previously Presented) The method according to claim 1, further comprising treating the liquid medium by electrolysis.

23. (Previously Presented) The method according to claim 22, wherein the electrolysis causes the liquid medium to circulate in at least one electrolysis cell in which a current circulates between an anodic electrode and a cathodic electrode.

24. (Previously Presented) The method according to claim 23, wherein the cathodic electrode is produced by compressing carbon particles between two perforated plates into which at least one electrode forming means is inserted while being connected to a negative pole of a generator.

25. (Previously Presented) The method according to claim 23, wherein the anodic electrode is produced by compressing zinc chips between two perforated plates into which at least one electrode forming means is inserted while being connected to a positive pole of a generator.

26. (Previously Presented) The method according to claim 23, wherein the liquid medium circulates in at least six electrolysis cells.

27. (Previously Presented) The method according to claim 22, further comprising maintaining a pH of the liquid medium above 5 during the entire electrolysis step.

28. (Previously Presented) The method according to claim 23, wherein electrolysis includes applying a potential between the anodic electrode and cathodic electrode of approximately 2 volts for a current intensity between 1.5 and 1.8 amperes per L of solution treated.

29. (Currently Amended) The device for chemically treating a liquid medium loaded with nitrates and with a pH less than 4, comprising

at least one liquid nitrate reduction enclosure, which comprises a liquid inlet,

at least one zinc layer, wherein the zinc is in the form of chips,

a means for the circulation of said liquid medium, through said zinc layer, and

a liquid medium outlet of the enclosure.

30. (Previously Presented) The device according to claim 29, further comprising at least one pH regulator, capable of maintaining the liquid medium at a pH of less than 4.

31. (Previously Presented) The device according to claim 30, wherein the nitrate reduction enclosure is arranged vertically and comprises at least one zinc layer transversely arranged over an entire width of the enclosure and produced by compression of zinc chips between two perforated plates, and the liquid inlet is arranged in a lower part of the enclosure, and the liquid outlet is arranged in an upper part of the enclosure, wherein the device further comprises a recirculation pump capable of ensuring circulation and recirculation of the liquid from the inlet to the outlet by traversing all the zinc layers.

32. (Previously Presented) The device according to claim 29, wherein each zinc layer has a height less than 10 cm.

33. (Previously Presented) The device according to claim 29, wherein the enclosure comprises a system for stirring the liquid capable of stirring the liquid circulating in the enclosure above each zinc layer by forming a corresponding stirring zone.

34. (Previously Presented) The device according to claim 33, wherein the liquid in each stirring zone has a stirring speed of 0.85 m/s.

35. (Previously Presented) The device according to claim 33, wherein at least one stirring zone is connected to a pH regulator.

36. (Previously Presented) The device according to claim 35, wherein the pH regulator further comprises at least one probe that measures the pH in the corresponding stirring zone, a control enclosure and an acid circulation pump.

37. (Previously Presented) The device according to claim 36, wherein the pH regulator maintains a pH between 2 and 3 the corresponding stirring zone between 2 and 3.

38. (Previously Presented) The device according to claim 29, wherein the liquid in the enclosure has a circulation speed of approximately 0.01 m/s.

39. (Previously Presented) The device according to claim 31, wherein the enclosure comprises at least three zinc layers.

40. (Previously Presented) The device according to claim 29, further comprising a zinc reduction enclosure in which the liquid circulates at the outlet of the nitrate reduction enclosure.

41. (Previously Presented) The device according to claim 40, wherein the zinc reduction enclosure comprises at least one electrolysis cell.

42. (Previously Presented) The device according to claim 41, wherein each cathodic electrode of the respective electrolysis cells is produced by compression of carbon particles between two perforated plates and at least one electrode forming means is inserted into the carbon particles and connected to a negative pole of a current generator.

43. (Previously Presented) The device according to claim 41, wherein each anodic electrode of the respective electrolysis cells is produced by compression of zinc chips between two perforated plates and at least one electrode forming means is inserted into the zinc chips and connected to a positive pole of a current generator.

44. (Previously Presented) The device according to claim 41, wherein the zinc reduction enclosure comprises at least three electrolysis cells.

45. (Previously Presented) The device according to claim 43, wherein the zinc reduction enclosure is vertical and anodic electrodes and cathodic electrodes, which form the corresponding electrolysis cells, are arranged transversely over an entire width of the enclosure, so that all the liquid circulating in the enclosure traverses the electrolysis cells, in that the liquid inlet is arranged in a lower part of the of the enclosure, in that the liquid outlet is arranged in an upper part of the enclosure, and in that the device of the invention further comprises a recirculation pump capable of ensuring circulation and recirculation of the liquid from the inlet up to the outlet by traversing all the electrolysis cells.

46. (Previously Presented) The device according to claim 40, further comprising a pH regulator that maintains the liquid medium circulating in the zinc reduction enclosure at a pH above 7.

Claims 47 and 48 (Cancelled).

49. (Previously Presented) The method according to claim 22, further comprising maintaining a pH of 10 in the liquid medium during the entire electrolysis step.